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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,900	01/30/2004	Achim Melching	87333.3281	5703

7590 10/14/2005

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Washington, DC 20036

EXAMINER
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DOERRLER, WILLIAM CHARLES

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/766,900	<b>Applicant(s)</b> MELCHING ET AL.	
	<b>Examiner</b> William C. Doerrler	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10-21-2004</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4 it is unclear if multiple openings are required. In claim 17, "the control device" lacks clear antecedent basis.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6,9-11,13-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of McClurkin '187.

Cook discloses applicants' basic inventive concept, a cabinet for heat treating an object with means to move the object and a door, substantially as claimed with the exception of a gas supply by the opening to produce a gas curtain having multiple rows of openings including one that directs gas outwardly to prevent the transfer of heat and gas between the chamber and the external atmosphere. McClurkin '401 shows this feature to be old in the heat transfer chamber art. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention from the teaching of McClurkin to modify the heat treatment device of Cook by using rows of gas outlets to prevent the mingling of internal and external gas when the door is opened. Switch 41 of McClurkin shows the switch for automatically controlling the gas flow device. McClurkin also shows openings on opposite sides of the opening in accordance with claim 4. The treatment of slides is seen as intended use, which the device of Cook is clearly capable of performing.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of McClurkin '187 as applied to claims 1-6,9-11,13-15 and 18 above, and further in view of Moore et al.

Cook, as modified, discloses applicants' basic inventive concept, a climatic cabinet with means to move objects therein with gas curtain means to prevent gas ingress to the cabinet, substantially as claimed with the exception of gas collection chambers connected to the gas supply conduit. Moore et al shows gas collection chambers 44 which collect air and pass the air through the heat exchanger before passing it to a discharge chamber to pass it across the opening of the chamber. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention from the teaching of Moore et al to modify the treatment cabinet of Cook by using gas collection chambers to permit the reuse of treated air use for the gas curtain to reduce the need for continually supplying new gas for the curtain.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of McClurkin '187 as applied to claims 1-6,9-11,13-15 and 18 above, and further in view of Crawford.

Cook, as modified, discloses applicants' basic inventive concept, a climatic cabinet with means to move objects therein with gas curtain means to prevent gas ingress to the cabinet, substantially as claimed with the exception of gas exhaust openings integrated into the door. Crawford shows gas exhaust openings 11 integrated into the door to be old in the art. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention from the teaching of Crawford to modify the treatment cabinet of Cook by using gas exhaust openings integrated with the door to ensure that the gas is expelled in the area adjacent to the door.

Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of McClurkin '187 as applied to claims 1-6,9-11,13-15 and 18 above, and further in view of Mori et al.

Cook, as modified, discloses applicants' basic inventive concept, a climatic cabinet with means to move objects therein with gas curtain means to prevent gas ingress to the cabinet, substantially as claimed with the exception of nitrogen as the gas and automatic doors. Mori et al shows in figure 5 a transfer chamber from a nitrogen chamber with automatic doors to permit transfer of objects between chambers. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention from the teaching of Mori et al to modify the treatment cabinet of Cook by using automatic doors to permit for easy transfer between chambers and using nitrogen for the gas to provide an inert atmosphere for the treatment.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of McClurkin '187 as applied to claims 1-6,9-11,13-15 and 18 above, and further in view of Carlson et al.

Cook, as modified, discloses applicants' basic inventive concept, a climatic cabinet with means to move objects therein with gas curtain means to prevent gas ingress to the cabinet, substantially as claimed with the exception of controls for the gas curtain which control the curtain in relation to the temperature difference between the inside and outside of the chamber. Carlson et al shows this feature to be old in the air curtain art (see the abstract and claim 15). It would have been obvious to one of ordinary skill in the art at the time of applicants' invention from the teaching of Carlson et al to modify the

treatment cabinet of Cook by using the temperature difference between the inside and outside of the chamber to control the gas curtain to conserve energy while still blocking the ingress of different temperature air into the chamber.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Terzian, Perbix (outward spraying with gas recovery), Chandler et al (automatic with opening of the door), Repp et al (using nitrogen), McClurkin '401, Blanton et al and Kitano show treatment chambers with air curtains.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Doerrler whose telephone number is (571) 272-4807. The examiner can normally be reached on Monday-Friday 6:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

William C Doerrler

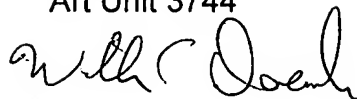
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Primary Examiner

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A handwritten signature in black ink, appearing to read "William C. Doe", is written over the printed name of the Primary Examiner.

WCD